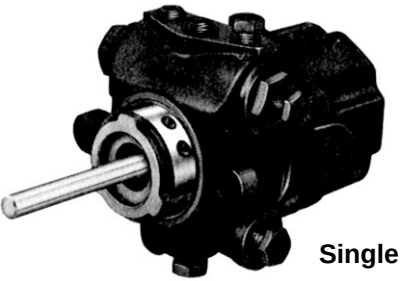
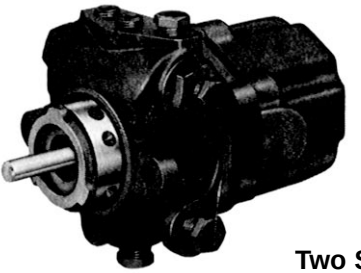
**V SERIES HIGH DELIVERY FUEL PUMPS**

The V Series is designed to meet the high delivery requirements of commercial, industrial, and institutional systems with a minimum of mechanical and hydraulic noise. Single-stage models can provide a firing rate up to 270 gph at up to 10" Hg inlet vacuum. Two-stage firing rates are as high as 205 gph up to 15" Hg inlet vacuum. Field adjustable integral regulating valves factory pre-set for 100 and 300 psi operation are offered as an option to meet specific system requirements.



**Single Stage**



**Two Stage**

**FUEL UNIT INSPECTIONS**

**Single- and Two-Stage Fuel-Units**

**V Series**
**High Capacity Fuel and Transfer Pumps**

*Capacities:*
Single-stage units: up to 180 gph with #2 oil, to 270 gph with 1000 SSU oil.
Two-stage units: up to 145 gph with #2 oil, to 205 gph with 1000 SSU oil

**NOTE:** See rating table for capacity at specific pressure and rpm

*Pressure:*
V02: Rated pressure 300 psi—factory set at 300 psi.
V05: Rated pressure 100 psi—factory set at 100 psi.
V08: Rated pressure 80 psi—factory set at 20 psi.
V00: No internal regulation.

*Speeds:*
1725 or 3450 rpm.

*Rotation*:
D Style—clockwise when viewed from shaft end.
CStyle—counter clockwise when viewed from shaft end.

*Porting:*
1/4" NPTF: gauge/optional nozzle port, nozzle port.
3/8" NPTF: return port, 2 optional inlets.
1/2" NPTF: inlet in cover

*Shaft:*
DM Style—7/16" x 3 5" extension from mounting face.
DO Style—7/16" x 1.88" extension from mounting face.

*Seal:*
Double lip type.

*Mounting:*
Hub or two bolt flange mount.

*Filter:*
No internal filter.
External Line filter recommended.

*Maximum Inlet Vacuum:*
Single-stage units: 10" Hg
Two-stage units: 15" Hg

U.L. Listed

**SELECTION TABLE**

**NOTE:** Max. Recommended Firing Rates apply at 10" Hg for single-stage units and 15" Hg for two-stage units

| | | Max. Recomd. Firing Rate gph 34SSU | | Max. Recomd. Firing Rate gph 1000SSU | | Inlet Line Sizing Requirement gph 34SSU thru 1000SSU | | Recommended Motor h.p. 34SSU | | 1000 SSU | | Dim. A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Shaft** | **1725** | **3450** | **1725** | **3450** | **1725** | **3450** | **1725** | **3450** | **1725** | **3450** | |
| | **V05 & V02 Series Single-Stage Fuel Pumps (with Internal Regulations)** | | | | | | | | | | | |
| 100 psi Ratings | V052D-4D020 | 40 | 75 | 65 | 135 | 65 | 135 | .25 | .33 | .25 | .75 | 5.13 |
| | V056C-4D020 | 130 | — | 190 | — | 190 | — | .50 | — | .75 | — | 5.13 |
| 300 psi Ratings | +V022C-4D020 | 20 | 60 | 50 | 120 | 50 | 120 | .50 | .75 | .50 | 1.0 | 5.13 |
| | +V023C-4D020 | 40 | 105 | 80 | 185 | 80 | 185 | .50 | 1.00 | .50 | 1.5 | 5.13 |
| | +V024C-4D020 | 60 | 140 | 110 | 240 | 110 | 240 | .75 | 1.5 | .75 | 2.0 | 5.13 |
| | +V026C-4D020 | 95 | — | 155 | — | 155 | — | 1.0 | — | 1.0 | — | 5.13 |
| | +V028C-4D020 | 115 | — | 190 | — | 190 | — | 1.5 | — | 2.0 | — | 5.67 |
| 300 psi Ratings | +2V022C-5D020 | 20 | 60 | 50 | 120 | 100 | 205 | .50 | 1.0 | .50 | 1.5 | 5.67 |
| | +2V023C-5D020 | 40 | 105 | 80 | 185 | 140 | 270 | .75 | 1.5 | .75 | 2.0 | 6.17 |
| | +2V024C-5D020 | 60 | — | 110 | — | 200 | — | .75 | — | 1.0 | — | 6.71 |
| | +2V026C-5D020 | 95 | — | 155 | — | 250 | — | 1.5 | — | 1.5 | — | 7.75 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **V00 Series Single-Stage transfer (with no internal Regulation** | | | | | | | | | | | | |
| 20 psi Ratings* | V002C-4D0 | 45 | 85 | 70 | 140 | 70 | 140 | .25 | .25 | .25 | .50 | 5.13 |
| | V003C-4D0 | 70 | 140 | 100 | 205 | 100 | 205 | .25 | .25 | .25 | .75 | 5.13 |
| | V004C-4D0 | 95 | 175 | 140 | 270 | 140 | 270 | .25 | .25 | .25 | .75 | 5.13 |
| | V006C-4D0 | 145 | — | 200 | — | 200 | — | .25 | — | .50 | — | 5.13 |
| **V08 Series Single-Stage Transfer Pumps (with Internal Regulation)** | | | | | | | | | | | | |
| 80 psi Ratings* | V086C-4D020 | 135 | — | 190 | — | 250 | — | .33 | — | .75 | — | 7.75 |
| **2V00 Series Two-Stage Transfer Pumps (with no Internal Regulation)** | | | | | | | | | | | | |
| 20 psi Ratings** | 2V006C-5D0 | 145 | — | 200 | — | 250 | — | .33 | — | .75 | — | 7.75 |
| **2V08 Series Supply Pumps (with Internal Regulation)** | | | | | | | | | | | | |
| 80 psi Ratings** | +2V086C-5D04 | 135 | — | 190 | — | 250 | — | .50 | — | 1.0 | — | 7.75 |

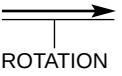
* Operating pressure to 300 psi permissible (using external regulating valve)
V00 Series gph and hp ratings at 100 psi same as V05 ratings above.
V00 Series gph and hp ratings at 300 psi same as V02 ratings above.

** Operating pressure to 300 psi permissible (using external regulating valve)
2V00 Series gph and hp ratings at 300 psi same as V02 ratings above.

*+Also available in clockwise rotation.*

## V SERIES CODE ANALYSIS

HARDENED GEARS —**H** **J71**—MFG. DATE CODE




| V0 | 2 | 6 | C | 1 | 00 | 30 |
|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G |

**A**

| Pump Series |
|---|
| VO—Single-Stage |
| 2VO—Two-Stage |

**B**

| Pressure Code | Rated Pressure (psi) | Typ. Adj. Range (psi) |
|---|---|---|
| 0 | No Valve | — |
| 5 | 100 | 85-120 |
| 2 | 300 | 125-330 |
| 8 | 80 | 15-85 |

**C**

| Gear Size Code | Nom. Thickness |
|---|---|
| 2 | 1/4 |
| 3 | 3/8 |
| 4 | 1/2 |
| 6 | 3/4 |
| 8 | 1 |

**D**

| Body Style | Rotation | Nozzle |
|---|---|---|
| C | CCW | Left |
| D | CW | Right |

**NOTE:** Nozzle location and shaft rotation determined viewing unit from shaft end.

**E.**

| No. | Design Series |
|---|---|
| 1 | Initial Design |
| 3 | 2-Stage, Inlet Gear One Size Larger than Pressure Gear |
| 4 | Single-Stage, Seal Pressed in Body |
| 5 | Same as 3 Ex. Seal Pressed/Body |

**F.**

| Cust. Code | Shaft Ext. |
|---|---|
| DM | 3-1/2 |
| DO | 1-7/8 |

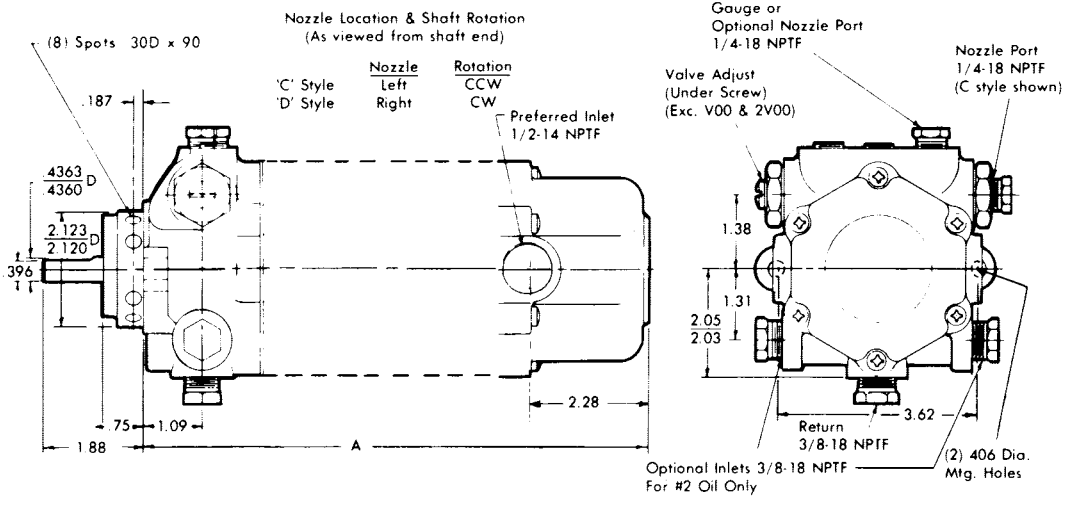
**G**

| Pump Operation |
|---|
| V-Guide, One Slot, No Cutoff |
| No Number for Transfer Pumps |

### Rotation and Nozzle Location

V Series Fuel-Units are available in standard C Style Models (counterclockwise rotation, nozzle port on left, as viewed from shaft end) or D Style Models (clockwise rotation, nozzle port on right, as viewed from shaft end.

## Dimensions

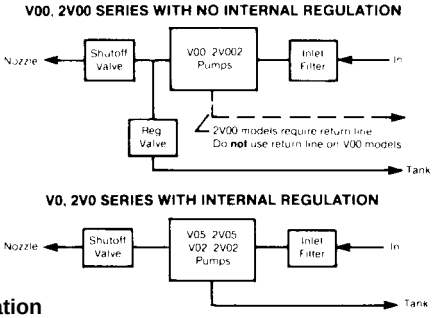



**NOTE:** To assure compliance with National Fire Protection Association's Bulletin 31, "Installation of Oil Burning Equipment," fuel unit inlet pressure should not exceed 3 psig.

**INSTALLATION DATA**

V Series pumps are shipped from the factory set for two-pipe operation. They are not recommended for use in one-pipe systems (except series V00, see Note 1).

**IMPORTANT:** Do not loosen or try to tighten any pump plugs not to be used in the installation. NON-HARDENING OIL PIPE DOPE IS RECOMMENDED for use on the threads of all fittings. Teflon tapes or paste must be used with care to prevent depositing tape pieces or fibers into critical internal areas of the pump. Reduced torques must be used with teflon materials to avoid thread or casting damage. EVIDENCE OF TEFLON MATERIAL IN INTERNAL AREAS OF THE FUEL-UNIT WILL BE CAUSE TO VOID WARRANTY.




**Installation**

1. Connect inlet line to preferred INLET PORT. Use of inlet in cover is recommended for minimum inlet vacuum loss. Connect nozzle line to nozzle port.

2. Connect return line to preferred RETURN PORT except on V00 pumps. Use of bottom return is recommended to minimize back pressure. Top return port not recommended for oil heavier than #2.

3. Plug all unused ports securely.

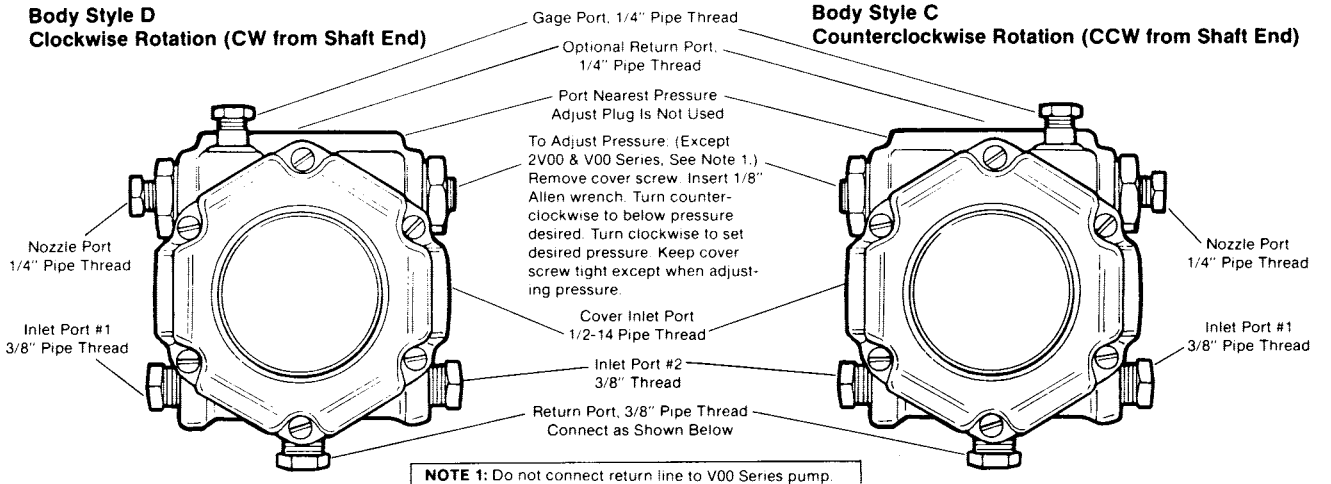
4. Start burner. Two-stage and most one-stage pumps will self-vent. V00 with shut-off valve in nozzle line may have to be vented manually by loosening GAGE PORT plug. Tighten plug securely when oil flows clear.

**Installation Notes:**

“Fuel unit inlet pressures should not exceed 3 psig in order to comply with National Fire Protection Association’s Bulletin 31.”

To assure maximum performance, INLET VACUUM, measured at unused INLET PORT, should not exceed 10” Hg on single-stage pumps or 15” Hg on two-stage pumps.

**NOTE:** Max Recommended Firing Rates apply to 10” Hg for single-stage units and 15” Hg for two-stage units.




**NOTE 1:** Do not connect return line to V00 Series pump. Keep both return ports plugged. V00 and 2V00 do not have internal regulation. Use external regulation if required. Return line **must** be connected to 2V00 models.